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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/406,570	09/24/1999	AKIHIKO.SHIMIZU	2271/57219-A	1757

7590

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EXAMINER

PSITOS, ARISTOTELIS M

ART UNIT

PAPER NUMBER

2653

DATE MAILED: 04/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/406,570

Applicant(s)

SHIMIZU ET AL

Examiner

Aristotelis M Psitos

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 2/2202.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 and 7-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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**DETAILED ACTION*****Continued Prosecution Application***

The request filed on 2/22/02 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/406570 is acceptable and a CPA has been established. An action on the CPA follows.

***Drawings***

The amendment to Figure 17 as --Prior Art is acknowledged and approved by the examiner.

The drawings are objected to for not showing all the features claimed, i.e., the method limitations of claims 18 and 7. Either a submission of corrected figs. or cancellation of this subject matter is required.

Additionally, a review of figs 6a and c, lead the examiner to conclude that what is labeled L in fig. 6a is actually the width of the partition wall. The formula depicted/claimed in claim 18 is not understood, as presented. Is applicant intending to say that the width (designated by the Greek letter delta) the result of subtracting a value equal to the sum of the two components,  $BD1/2$  PLUS  $BD2/2$ , or something else? Further clarification is respectfully requested.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Furthermore, correction of the figures as required in the OA of 10/02/00 form 948 is required as well.

***Claim Rejections - 35 U.S.C. § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1 As disclosed, the specification recites/requires that there is a connection of the phase pit with one of the information tracks. There is no disclosure wherein such a connection is not found.

Claims 1-5, 7-12, and 18 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure, which is not enabling.

connected

8-12

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With respect to claims 8 – 12, the connection of the phase pit and the information track being critical or essential to the practice of the invention, but not included in the claim 8 is not enabled by the disclosure. Additionally, there is no land section/area recited in these claims and such an area is disclosed in all the embodiments found in the specification. Hence this feature is considered critical as well. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Dependent claims 9-12 fail to clarify the above critical subject matter and fall with their respective parent claim.

Additionally, with respect to independent claims 1 and 18, as disclosed, the phase pit depth and the information track depth are equal. There is no range of values disclosed that would enable one of ordinary skill in the art to establish when such elements are of "substantially equal depth". Since none of the dependent claims clarify the above, they fall with their respective parent claim.

- ✓ 2. Claims 8-12 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In particular, the disclosure as originally present provided for a separation between the phase pit ✓ and one of the adjacent information tracks by a "partition wall". Claim 8 now recites "partition walls". Since the examiner cannot readily ascertain where in the original disclosure such existed, the above new matter rejection is made. Absent any disclosure thereto, cancellation of such subject matter is required.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-5, and ~~7~~ 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants' have submitted three independent product claims.

The examiner cannot discern any patentable features missing from the independent claims, i.e., all the limitations of claim 1 are found in claims 8 and 13. Similarly, all the limitations of claim 8 are found in claims 1 and 13, and all the limitations of claim 13 are found in claim 1 and 8.

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With respect to claims 1 and 8, as argued/stated in applicants' response on pg. 7, these claims differ in three aspects:

a) no grooves in claim 1, whereas there are grooves in claim 8.

Since the only disclosure in the specification is to grooves, claim 1 fails to recite critical subject matter – grooves less medium is NOT disclosed. The examiner suggests amending claim 1 accordingly.

b) no phase pit connection recited in claim 8, but is found in claim 1.

Since the only disclosure in the specification is to a phase pit connection, claim 8 fails to recite critical subject matter. No disclosure drawn to no phase pit connection. The examiner suggests amending claim 8 accordingly.

c) phase depth in claim 1 between the phase pit and track are "substantially equal", whereas in claim 8 they are equal.

Since there is no DISCLOSURE for one of ordinary skill in the art to ascertain what is "substantially equal depth" as opposed to equal depth, claim 1 is drawn to an INSUFFICIENT disclosure. - see above rejection thereof and hence the claim also fails to particularly point out and distinctly claim the invention.

When such amendments are done, claim 1 and claim 8 would be identical.

With respect to claims 8 and 13, applicants argue on page 2-3 of the above response, these claims differ in one aspect:

a) claim 8 recites partition wall(s) separating the adjacent tracks; unfortunately, no such disclosure is found – hence the new matter rejection above. The examiner can only find reference to separation of the adjacent tracks by a partition wall. Correction of course is required, and once corrected these claims define no patentable distinction.

Hence the examiner cannot readily ascertain the distinction between these independent claims.

The dependent claims fail to correct the above deficiency and fall with their respective parent claim.

***Claim Rejections - 35 U.S.C. § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103 (c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 18, 7, 8 and 13 are rejected under 35 U.S.C. 103 as being obvious over the acknowledged prior art.

The product claims, claims 1, 8 and 13 read upon applicants' description of the prior art as found on page 5 of the specification with respect to fig. 14 and the admitted prior art.

As depicted/claimed, there is an optical record – medium – having information tracks extending circumferentially. This is depicted in this fig. Furthermore, there is a first and second information track – see the description of this figure and the labeling thereof of a first and second information track, wherein a phase pit (so labeled) is connected to the second track, extending but not reaching the first track and

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separated from the first track by a partition wall. The examiner considers the phase pit and groove pit depth to be equal, hence substantially equal as well.

The remaining requirement (with respect to claim 1): that the phase pit "encoding information for the first information track" is what is defined by the phase pit that is connected to the second track has not been specifically stated in applicants' description of this prior art. Applicants' cooperation in providing a copy thereof and an English translation if not in English in order to complete the search report is respectfully requested.

The ability of having the standard pre-pit information for an associated track is considered to be notoriously old and well known an Official notice is taken thereof- see MPEP section 2144.03. The examiner considers that to be the pre-pit designated in the prior art fig. The additional requirement that this information is for the first information track is considered an obvious variant of having trailing information. The concept of trailing information is one in which information indicative of what has just occurred, transpired, or has just previously passed by is routine in the information arts, sometimes called "trailers", or postamble information.

Although the examiner cannot readily ascertain as to what the acknowledge prior art is – see attached abstract of JP 9-230696 drawn to a developing device as opposed to the same document # recited on page 4 line 23, again the examiner considers the remaining limitation with respect to the depth of the groove and depth of the phase pit as being equal to also be included therein. Alternatively, if applicants' can convince the examiner that such is not inherently present in the acknowledged prior art, then the examiner would rely upon either Shimizu or Ando for teaching such under further 103 grounds, as being an obvious variant from that of the acknowledged prior art with no unexpected results occurring from selection of such an obvious variant.

The placement of either preamble or postamble information is merely a substitute of equivalents and a rearrangement of parts with no unexpected results seen to occur thereof. This argument is also present for the product claims 8 and 13.

The examiner interprets the method limitations of claims 18 and 7 as flowing from the product, and hence present in the prior art.

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5. Claims 2, 3, 9,10,11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the acknowledged prior art as applied to claims 1, 8 and 13 above, and further in view of Tsuchiya et al.

The limitations recited (it is noted that claims 9,10, 11 and 15 duplicate claims 2 and 3 respectively, and hence the examiner will only discuss the limitations of claims 2 and 3 specifically, but the position taken is the same for claims 9,10,11 and 15) are found in the secondary reference to Tsuchiya et al - note his values for TP (track pitch), spot size, pit width. Although the groove width is not specifically recited, the examiner takes the position that the groove width in this environment ranges from .4 to .6 micrometers.

The examiner interprets the limitations of these claims to be modifications of the acknowledged prior art in order to maximize/optimize system parameters. Obviously the ability to provide for cross talk prevention is one of those parameters as is increasing recording density. ✓

5. Claims 2-5,9-12,14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the acknowledged prior art as applied to claims 1,8 and 13 above, and further in view of Mieda et al or Sugaya et al

Again, the limitations of claims 9-12 and 14-17 are found in claims 2-5, and hence the examiner will discuss the limitations of claims 2-5.

Either Mieda et al or Sugaya et al depicts optical records having a plurality of pit formats available for maximizing system parameters such as cross talk reduction/ increasing recording density.

In Mieda et al, figs. 3-5 provide for a variety of parameters to be varied.

The examiner interprets the "short pit" parameters for meeting the limitations of claims 2 & 3, while the "long pit" parameters for the limitations of claims 4 and 5.

It would have been obvious to one of ordinary skill in the art to modify the acknowledged prior art with the above teachings from Mieda et al -motivation being to maximize system parameters.

Applicants' attention is also drawn to Sugaya et al, which also teaches the parameter variations re TP, LP, and BD and can be relied upon to meet the limitations of claims 2,3, 9,10,14 and 15.

### **Conclusion**

Applicants' attention is also drawn to the following references and analysis thereof



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- a) Nishikawa – fig. 2 – all of them.
- b) Ooki et al – land/groove with pre-pits in appropriate locations.
- c) Dil – L/G recording with prepits appropriately located.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M Psitos whose telephone number is (703) 308-1598. The examiner can normally be reached on M-Thursday 8-4 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, W. Korzuch can be reached on (703) 305- 6137. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-6606 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

AMP

4/22/2002



ARISTOTELIS M. PSITOS  
PRIMARY EXAMINER